

Remarks/Arguments:

Claims 26-50, presented hereby, are pending.

Claims 1-25 are cancelled hereby, without prejudice or disclaimer.

Present independent claim 26 contains the subject matter of claim 5 (i.e., claim 1 having claim 5 incorporated therein) amended as explained below. Present dependent claim 30 corresponds to claim 6 amended as explained below. Present claims 27-29 and 31-50 correspond to claims 2-4 and 7-25, respectively, revised to depend directly or indirectly on present claim 26.

Claim 13 was objected to in the Office Action as being dependent on a rejected base claim; but, the claim would be allowable, according to the Office Action, if rewritten as an independent claim, including all of the limitations of the base claim and any intervening claims. Applicants wish to thank the Examiner for the timely indication of allowable subject matter.

In accordance with the Office Action: claims 9 and 11 were rejected under 35 USC 112, first paragraph, claim 9 being allegedly awkward and, as for claim 11, the "PR-functional" polyether being allegedly unascertainable; claims 5-7, 14 and 16 were rejected under 35 USC 112, second paragraph, as being allegedly indefinite; claims 1-11, 15, 18, and 19 were rejected under 35 USC 102(b) as being allegedly anticipated by King et al., U.S. Patent 5,696,209; claims 20-25 were rejected under 35 USC 102(b) as allegedly anticipated by or, in the alternative, under 35 USC 103(a) as allegedly being obvious over King et al., U.S. Patent 5,696,209; claims 12, 16, and 17 were rejected under 35 USC 103(a) as being allegedly unpatentable over King et al., 5,696,209 in view of Lutz et al., U.S. Patent 6,201,055. Reconsideration is requested with respect to the aforesaid rejections of record based on the changes to the claims effected, hereby, in view of the following remarks.

With respect to the rejections under §112, ¶1, and §112, ¶2:

- a) All substances listed in claim 9 and on page 13, third paragraph, of the present patent application are condensation catalysts as well as condensation cross-linking agents. In this context "and/or" between both terms in claim 9 is replaced by "or."
- b) "PR-functional polyether" means a polyether providing a PR-group, i. e., a phosphorous atom substituted with a residue "R", which is defined in the legend to the two formulas of claim 11. As such, the objected term in claim 1 is perfectly clear for a person skilled in the art.
- c) In order to overcome the objections concerning the term "especially," the term is deleted from the claims, hereby.
- d) In order to overcome the objections concerning the term "preferably," the term is deleted from the claims, hereby.
- e) Claim 14 amended to overcome the objection concerning lack of antecedent basis.

With respect to the rejections of record under §102(b) and §103(a), the rejections are overcome for the following reasons.

In order to further distinguish the subject matter of the present invention from that disclosed in references cited, the features of claim 5, i.e., the formulas for component (d1) and (d2), are incorporated into claim 1 and the definition recited for formula (d1) is amended by deleting "-OH" from the legend for residue R² and by deleting "polyethers" and "polyesters" from the legend for residue X. Furthermore, the definition of formula (d2) is amended by deleting "alkoxy" from the legend for residues R³ and R⁴. A proviso clause, excluding silanes containing at least two alkoxy groups per molecule, is added.

Thus, replacement claim 26 contains the subject matter recited in claim 5, wherein:

- the alkynyl compound (d1) is R^1-C- = $-X-R^2$, with R^1 = alkyl, aryl, arylalkyl, halogen-substituted alkyl and aryl groups, cyanoalkyl, cycloalkyl, cycloalkenyl, -H, alkoxy, acyl and combinations thereof (i.e. "-OH" was deleted with respect to former claim 5), and X= polysiloxane, oligosilicic acid esters, polysilicic acid esters, polymeric hydrocarbons and copolymers of the above mentioned compounds (i.e. "polyethers" and "polyesters" were deleted); and
- for the Si-OR compound (d2), R^3 = alkynyl-, alkynyl, halogen, aryl, alkylaryl, H, halogen-substituted alkyl and aryl groups, alkyl, hydroxy, and combinations thereof (i.e., alkoxy was deleted), $R^4 = R^3$, or R^4 is different from R^3 , wherein R^4 is hydroxyl, alkyl, methyl, alkynyl, ethynyl or combinations thereof (i.e. "alkoxy" was deleted).

With regard to the proviso clause, silanes containing at least two alkoxy groups per molecule, within the meaning of this proviso, are compounds according to the general formula $R^{1-x}Si(OR^2)_x$, with $x>2$ and each of R^1 and R^2 = alkyl or alkoxyalkyl, as described by King et al., of record (column 4, line 43), and by Antonen, of record(column 8, line 21).

The definitions of the respective formulas in claim 6 are accordingly amended to be commensurate with the changes to claim 5, incorporated into claim 1.

The subject matter presently claimed (broadly, in claim 26) is novel under §102(b) with regard to King et al.

For anticipation under § 102 to exist, each and every claim limitation, as arranged in the claim, must be found in a single prior art reference. *Jamesbury Corp. v. Litton Industrial Products, Inc.*, 225 USPQ 253 (Fed. Cir. 1985). The absence from a prior art reference of a single claim

limitation negates anticipation. *Kolster Speedsteel A B v. Crucible Inc.*, 230 USPQ 81 (Fed. Cir. 1986). A reference that discloses "substantially the same invention" is not an anticipation. *Jamesbury Corp.* To anticipate the claim, each claim limitation must "*identically appear*" in the reference disclosure. *Gechter v. Davidson*, 43 USPQ2d 1030, 1032 (Fed. Cir. 1997) (*emphasis added*). To be novelty defeating, a reference must put the public in possession of the identical invention claimed. *In re Donahue*, 226 USPQ 619 (Fed. Cir. 1985).

King et al. disclose compositions comprising:

- as component (A) an alkenyi functional siloxane resin; as
- component (B) a SiH containing polyorganosiloxane; as
- component (C) a silane;
- as component (D) a hydrosilylation catalyst;
- as component (E) a moisture curing catalyst; and
- optionally, as component (F) an aikynyl functional polydiorganosiloxane.

As especially mentioned in King, column 3, lines 26 to 30 (in connection with column 3, line 9-12), and in claim 1, component (A), component (B), and component (F) – if providing a $Z\text{SiR}^1_{x_1}(\text{OR}^2)_{3-x}$ group with R^2 being a $C_1\text{-}C_3$ alkyl or a alkoxyalkyl group and with $x=0$ or 1 – contain at least two alkoxy or alkoxyalkyl residues as Si-OR groups. However, the feature (limitation) (d2) according the presently claimed invention contains, at most, one alkoxy group, i.e., when R in formula (d2) is alkyl. Therefore, none of components (A), (B), and (F) meets the feature (d2) recited in the present claims.

Likewise, King component (C), which has the formula $R^{1-y}\text{Si}(\text{OR}^2)_y$, with R^2 being a $C_1\text{-}C_3$ alkyl or a alkoxyalkyl group and $y = 2\text{-}4$ (cf. col. 4, lines 42-48), contains at least two alkoxy or

alkoxyalkxy residues as Si-OR groups. Therefore, component (C) of King does not meet the component (d2) recited in the present claims for the same reasoning, explained above, in connection with King components (A), (B), and (F).

In addition, the proviso of claim 26 explicitly excludes silanes containing at least two alkoxy groups. Therefore, even assuming, arguendo, that King et al. disclose compositions containing an alkynyl functional component (F), this reference does not anticipate the alternative of claim 26 containing substances (a), (b), (c) and(d1). This is because the composition according King et al. contains a silane component containing at least two alkoxy groups, which is excluded from the present claims.

Accordingly, none of components (A), (B), (C), and (F) of King meets either feature (d1) or (d2) of the present claims. As such, a limitation on the present claims is absent from the cited reference and, so, anticipation under §102(b) based on King is negated. *Kolster Speedsteel A B, supra*. Consequently, withdrawal of the rejection is in order.

With respect to the compositions described by Antonen (US 4,754,013), they comprise an organopolysiloxane containing two vinyl radicals per molecule, an organohydrogensiloxane, a hydrosilylation catalyst, and a moisture curable organosiloxane. The moisture curable organosiloxane comprises a mixture of i) a liquid, hydroxyl-terminated polydiorganosiloxane, ii) a silane containing three alkoxy groups (cf. col. 3, lines 35-38), and iii) a catalyst such as a titanium orthoester.

As described in Antonen, column 7, lines 54 to 62, the components of the curable organosiloxanes, i.e., components i), ii), and iii), are either added separately to the composition or are prereacted before being added to the composition. In both cases, however, the composition

includes a silane containing at least three alkoxy groups bonded to a silicon atom per molecule (cf. col. 7, line 59) or a substance containing at least two alkoxy groups per molecule (cf. col. 7, lines 63-65), both of which are excluded from the present claims. Furthermore, the composition according to Antonen does not contain any compounds with an alkynyl group. As such, a limitation on the present claims is absent from the cited reference and, so, anticipation under §102(b) based on Antonen is negated. *Kolster Speedsteel A B, supra.* Withdrawal of the rejection is, therefore, in order.

As to the rejections under § 103(a), a brief review of the prior art, in general, is in order.

Prior art compositions in which either two silicone impression materials having different consistencies are employed, are associated with the disadvantages of inconvenient handling, the risk of wrong dosage, and the risk of non-homogenous mixing of the two components (cf. present specification, pg. 2, last par. - pg. 5, 1 st par.). Light to heavy-body so-called putty cartridge materials, which provide the drawback of having a short pot life (cf. present specification, pg. 5, 2nd and 3rd par.), are used as impression materials. Thus, an object of the presently claimed invention is to provide an impression material from mixer-suitable components based on addition-cross-linkable polydimethylsiloxanes, which can be easily dispensed from automatic mixing and dosing systems, and which undergo a transition from a first to a second consistency after the mixing period and, so, form the impression material, which cures completely to a final stage after a presettable pot life, during which pot life an impression is made in the impression material.

Surprisingly, this object is solved by a composition according to the present claims. The transitions-of-consistency are achieved on account of the fact that the composition presently claimed cures in a two-step reaction mechanism. One of the reaction steps involves of the

hydrosilylation reaction of alkenyl functional organopolysiloxanes with organohydrogenpolysiloxens in the presence of a suitable catalyst according to an addition mechanism. The other reaction step involves either condensation between at least one Si-OR-group containing compound (d2) in the presence of a condensation catalyst or, alternatively, a hydrosilylation reaction of alkynyl functional organopolysiloxanes with organohydrogenpolysiloxens. Such a material is not neither taught nor suggested by the prior art.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). A "ground of rejection is simply inadequate on its face . . . [when] the cited references do not support each limitation of [the] claim." *In re Thrift*, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002). When conducting an obviousness analysis, "all limitations of a claim must be considered in determining the claimed subject matter as is referred to in 35 U.S.C. 103 and it is error to ignore specific limitations distinguishing over the [prior art] reference." *Ex parte Murphy*, 217 USPQ 479, 481 (PO Bd. App. 1982).

King et al. (cf. e.g. col. 1, lin 4-6; col. 1, lin. 66 - col. 2, (in. 1; col. 2, fin. 56-61; col. 8. lin. 10-16), as well as Antonen and Lutz et al., solely refer to moisture curing adhesive compositions; whereas, the present claims are limited to compositions suitable for making "an impression." The demands on adhesives, on the one hand, and impression materials, on the other, are quite different. This is exemplarily demonstrated by the fact that the adhesive compositions according to Antonen should not provide a Shore A hardness of more than 20 (cf. col. 3, line 56-58); whereas,

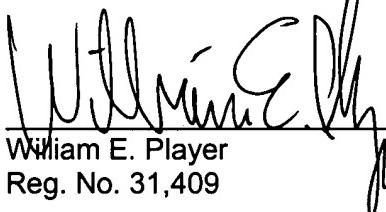
the corresponding hardness of the compositions according the presently claimed invention is typically about 70 (cf. present specification, table on pg. 33). The differing demands placed on adhesives as apposed to impression materials is, also, shown by the fact that adhesives need to firmly bond to a surface; whereas, on the contrary, e.g., a dental impression need not, and must not, bond to the applied surface from which the impression is taken. Since" the cited references do not support each limitation of [the] claim," the rejections under §103(a) based on the cited references are "inadequate." *Thrift*, 63 USPQ2d at 2008. Moreover, a person skilled in the art confronted with the problem solved by the presently claimed invention would not have even considered the cited references. Accordingly, withdrawal of the rejections of record under §103(a) is in order.

Favorable action is requested.

Respectfully submitted,

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